

## CLAIMS

1. A surveillance system comprising at least one transmitter, each being adapted to transmit a signal, and at least one receiver, each being adapted to receive a signal, said  
5 system being further adapted to:

- transmit a first signal by use of one of the at least one transmitters,
- transmit a second signal, succeeding the first signal, by use of one of the at least one transmitters,
- 10 - receive said first signal by use of one of the at least one receivers,
- receive said second signal by use of one of the at least one receivers,

the system further comprising means for comparing the received first signal and the received second signal in order to detect a difference, if present, in said two signals, said  
15 difference being caused by a physical change present in the signal path between at least one of the transmitting transmitters and at least one of the receiving receivers, said change occurring between initiation of transmittal of the first signal and termination of the receipt of the second signal.

20 2. A surveillance system according to claim 1, wherein the first and second signals are transmitted from the same transmitter.

3. A surveillance system according to claim 1, wherein the first and second signals are received by the same receiver.  
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4. A surveillance system according to claim 1, wherein the comparing means is adapted to detect a difference in signal strength between the first received signal and the second received signal.

30 5. A surveillance system according to claim 1, wherein the comparing means comprises processing means for processing the first and/or the second received signal(s) before comparing them, the comparison being performed on the basis of the processed signals.

6. A surveillance system according to claim 1, wherein the transmitter(s) is/are adapted to  
35 transmit the first signal during a pre-selected first time window and to transmit the second signal during a pre-selected second time window.

7. A surveillance system according to claim 1, wherein each of the signals transmitted is a constant signal, such as a carrier wave or a carrier wave like.

8. A surveillance system according to claim 1, wherein each of the signals transmitted is an impulse, or an impulse like signal.
- 5 9. A surveillance system according to claims 1, wherein the transmitter(s) is/are adapted to transmit an electromagnetic signal.
10. A surveillance system according to claim 9, wherein the transmitter(s) is/are adapted to transmit the first and the second signals as a first and a second set of packets of  
10 electromagnetic radiation, and wherein the receiver(s) is/are adapted to receive the first and second sets of packets.
11. A surveillance system according to claim 10, wherein the comparing means is adapted to compare the statistics on the signal strength of each packet to identify differences  
15 between the energy contents of the first and the second set of packets.
12. A surveillance system according to claim 10, wherein the comparing means is adapted to compare the signal parameters, such as polarization, spectrum and/or delay of each packet, so as to identify differences between the parameters of the first and the second set  
20 of packets.
13. A surveillance system according to claim 1, wherein the transmitter(s) and the receiver(s) are components of a wireless network used for data transmission and/or positioning.  
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14. A surveillance system according to claim 13, wherein the wireless network is a wireless local area network used for data transmission and/or positioning.
15. A surveillance system according to claim 1, wherein at least one transmitter and at  
30 least one receiver are combined into a transceiver.
16. A surveillance system according to claim 1, wherein the comparing means is adapted to compare the detected difference to at least one known value, so as to identify the physical change causing the difference.  
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17. A surveillance system according to claims 1, further comprising means for collecting and storing previously obtained information relating to a plurality of compared signals, and means for comparing said information in order to allow for evaluation of a temporal development of the obtained information.

18. A surveillance system according to claim 1, further comprising means for determining the position of physical changes in the volume of interest.

5 19. A surveillance method, the method utilising at least one transmitter, each being adapted to transmit a signal, and at least one receiver, each being adapted to receive a signal, the method comprising the steps of:

- transmitting a first signal by use of one of the at least one transmitters,
- 10 - transmitting a second signal, succeeding the first signal, by use of one of the at least one transmitters,
- receiving said first signal by use of one of the at least one receivers,
- receiving said second signal by use of one of the at least one receivers,
- comparing the received first signal and the received second signal in order to detect a
- 15 difference, if present, in said two signals, said difference being caused by a physical change present in the signal path between at least one of the transmitting transmitters and at least one of the receiving receivers, said change occurring between initiation of transmittal of the first signal and termination of the receipt of the second signal.

20 20. A method according to claim 19, wherein the first and second signals are transmitted from the same transmitter.

21. A method according to claim 19, wherein the first and second signals are received by the same receiver.

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22. A method according to claim 19, wherein the comparing step comprises detecting a difference in signal strength between the first received signal and the second received signal.

30 23. A method according to claim 19, wherein the comparing step comprises processing the first and/or the second received signal(s) before comparing them, the comparison being performed on the basis of the processed signals.

24. A method according to claim 19, wherein the first signal is transmitted during a pre-  
35 selected first time window and the second signal is transmitted during a pre-selected second time window, said first and second time windows preferably having equal duration.

25. A method according to claim 19, wherein each of the signals transmitted is a constant signal, such as a carrier wave or a carrier wave like.

26. A method according to claim 19, wherein each of the signals transmitted is an impulse, or an impulse like signal.

5 27. A method according to claim 19, wherein each of the transmitted signals is an electromagnetic signal.

28. A method according to claim 27, wherein the steps of transmitting a first and a second signal are performed by transmitting a first and a second set of packets of electromagnetic  
10 radiation, and wherein steps of receiving the first and the second signals are performed by receiving the first and second sets of packets.

29. A method according to claim 28, wherein the comparing step comprises comparing the statistics on the signal strength of each packet to identify differences between the energy  
15 contents of the first and the second set of packets.

30. A method according to claim 28, wherein the comparing step comprises comparing the signal parameters, such as polarization, spectrum and/or delay of each packet, so as to identify differences between the parameters of the first and the second set of packets.  
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31. A method according to claim 19, wherein the transmitter(s) and the receiver(s) are components of a wireless network used for data transmission and/or positioning.

32. A method according to claim 31, wherein the wireless network is a wireless local area  
25 network used for data transmission and/or positioning.

33. A method according to claim 19, wherein the first and second signals are transmitted and received by one or more transceivers.

30 34. A method according to claim 19, wherein the comparing step comprises comparing the detected difference to at least one known value, so as to identify the physical change causing the difference.

35. A method according to claim 19, further comprising the steps of:  
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- collecting and storing previously obtained information relating to a plurality of compared signals, and
- comparing said information in order to allow for evaluation of a temporal development of the obtained information.

36. A method according to claim 19, further comprising the step of determining the position of physical changes in the volume of interest.